

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (currently amended) A repair kit for use in the repair of damaged cartilage present at or on the surface of a bone site in an animal or human, in which the damaged cartilage is removed from the site and a groove is formed about the site and into the bone prior to implantation of the repair kit, and said repair kit comprising:

a pad of bio-compatible material shaped and dimensioned to occupy at least part of the site from which the damaged tissue has been removed;

an array of elongate connecting portions attached to or near the perimeter of the pad corresponding in shape to the groove, said portions being intended configured to extend away from the general plane of the pad at or near the perimeter of the pad in a direction towards a retaining element so as to provide a connection between said retaining element and said pad, said connecting portions configured so as to be introduced into the groove to a greater depth than said pad and to be anchored therein; and

wherein the a-retaining element is configured to be capable of being pushed to slide depthwise into the groove in order to apply a downward pulling force to said connecting portions to locate and retain the pad in said part of the bone site, and wherein said retaining element is spaced apart from said pad in anchored position within said groove by a length of said connecting portions.

2. (previously presented) A repair kit according to claim 1, in which the pad is seeded with chondrocytes or cartilage-forming cells prior to implantation.

3. (previously presented) A repair kit according to claim 1, in which the elongate connecting portions are formed by one or more flexible tensile elements taken or "threaded" through the pad,

at or near the periphery of the pad, and which can extend generally perpendicular to the plane of the pad so as to be received by the groove with adjacent elements being spaced apart from each other to allow tissue ingrowth in the groove.

4. (previously presented) A repair kit according to claim 3, in which a single filament, thread or yarn is attached to the periphery of the pad, and extends downwardly of the pad in loops of generally parallel lengths.

5. (previously presented) A repair kit according to claim 4, in which the retaining element is pre-attached to the ends of the loops, so that downward movement of the retaining element into the groove pulls the loops downwardly until the pad is received by and then anchored in or at the bone site.

6. (previously presented) A repair kit according to claim 4, in which the ends of the loop are first entered into the groove by other means, including use of an introducer tool, and then the retaining element can be forced downwardly of the groove to engage with the loop ends and pull them downwardly to anchored engagement in the groove.

7. (previously presented) A repair kit according to claim 1, in which the retaining element is slideable depthwise of the groove and is pre-formed to have a shape corresponding generally with at least part of the shape of the groove, as seen in plan.

8. (previously presented) A repair kit according to claim 1, in which the retaining element is deformable to take up the required shape, prior to introduction into the groove.

9. (previously presented) A repair kit according to claim 1, in which the elongate connecting elements have looped ends and the retaining element comprises a ring, or near complete ring, which can be "threaded" through, or connected with, the looped ends of the elongate connecting elements, during the manufacture of the repair kit, or during the implantation procedures.

10. (previously presented) A repair kit according to claim 1, in which the pad is circular in shape, crescent-shaped, part circular with two straight sides, hexagonal, or having other multi-sided shape such that adjacent pads can inter-fit with each other to fill the space made available during the preparation of the bone site.
11. (previously presented) A repair kit according to claim 1, in which the pad, the elongate connecting portions, and the retaining element are pre-assembled on an implant delivery device ready for use by a surgeon when the bone site has been prepared.
12. (previously presented) A repair kit according to claim 11, in which the delivery device is hollow, at least at one end thereof, and onto which the retaining element and the pad are fitted ready for presentation by the delivery device to the prepared bone site and the surrounding groove.
13. (previously presented) A repair kit according to claim 12, in which the elongate connecting portions are arranged on the outer surface of the hollow end of the delivery device.
14. (previously presented) A repair kit according to claim 12, in which the elongate connecting portions are retained in position by a releasable holding arrangement.
15. (previously presented) A repair kit according to claim 14, in which the holding arrangement comprises a band of weak adhesive tape or the like, or a thin tubular band, for engaging the connecting portions and the outer surface of the hollow end of the delivery device.
16. (previously presented) A repair kit according to claim 11, in which the delivery device is capable of being removably mounted, at its remote end, on a manually operable implant tool handle.

17. (previously presented) A repair kit according to claim 16, in which the coupling between the tool handle and the delivery device includes a bearing which permits turning movement of the tool, during manipulation by the surgeon, without transfer of such movement to the delivery device.

18. (currently amended) A method for the repair of damaged tissue present at or on the surface of bone in an animal, including a human being, the method comprising:

forming a narrow groove around at least part of said damaged tissue, which groove extends into the bone below the damaged tissue,

replacing the tissue around which the groove extends by at least one layer of biocompatible replacement material, and

anchoring the biocompatible replacement material to the bone by the use of an array of elongate connecting portions attached to or near a perimeter of the biocompatible replacement material corresponding in shape to the groove, said elongate connecting portions extending away from the general plane of the biocompatible replacement material at or near the perimeter of the biocompatible replacement material in a direction towards a retaining element to provide a connection between said retaining element and said biocompatible replacement material, said elongate connecting portions configured to be introduced into the groove to a greater depth than said biocompatible replacement material and to anchored therein, said and a retaining element is configured to be pushed to slide depthwise into the groove in order to apply a downward pulling force to the connecting portions to locate and retain the biocompatible replacement material to the surface of the bone, and wherein the retaining element is spaced apart from the biocompatible replacement material in anchored position within the groove by a length of the connecting portions.

19. (previously presented) A method according to claim 18, in which the groove is formed by a reaming device.

20. (previously presented) A method according to claim 19, in which the depth of the groove is at least five times that of the thickness of tissue which is replaced.

21. (previously presented) A method of repair of damaged cartilage tissue at a bone site of an animal or human being, using a repair kit according to claim 1.